

## HAIR TREATMENT APPLICATOR

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### CROSS REFERENCE TO RELATED APPLICATION

The application claims the benefit of US Provisional application Serial No. 60/416,163 (Case 9049P), filed on October 4, 2002, and US Design application Serial No. 29/168,576 (Case D808), filed on October 4, 2002.

### BACKGROUND OF THE INVENTION

#### Field of the Invention

The present invention relates to hair treatment devices. More particularly, the present invention relates to hair treatment applicators and a method of applying hair treatment to hair.

#### Description of the Prior Art

Hair treatment or hair color applicators are known. Such hair treatment applicators allow a user to apply a hair product, such as a highlighter, to hair.

In U.S. Patent No. 6,079,420 to Musum, a highlighting comb is disclosed. The comb has a plurality of tines that are secured to a spine, which is connected to a handle. The tines are disposed adjacent to each other along a straight line. The user of the comb places the treatment material into retaining areas that are disposed between each of the respective adjacent tines and then passes the tines through the hair. The disclosed comb suffers from the drawback of failing to provide a separation between the retaining areas through which hair may pass that will be untreated.

In U.S. Patent No. 6,142,157 to de Laforcade, an applicator system is disclosed. The applicator has a handle with a brush, and a plurality of brush members extending from a first side of the brush. The brush members are disposed along the first side of the brush in parallel and perpendicular rows. A user places the hair product onto the brush members and passes the applicator along a lock of hair so that the brush members transfer the hair product to the hair. The disclosed applicator suffers from the drawback of failing to allow for a separation between treated and untreated hair.

### SUMMARY OF THE INVENTION

It is an object of the present invention to provide a hair treatment applicator that applies hair treatment to a plurality of sections of hair.

It is another object of the present invention to provide such an applicator that provides  
5 for a separate and distinct set of treated hair or highlights over two distinctly separate sections of hair.

It is yet another object of the present invention to provide such an applicator that provides a separate, untreated section of hair in between two treated sections of hair.

These and other objects and advantages of the present invention are provided by a hair  
10 treatment applicator that has a handle and a plurality of retaining structures connected to the handle. Each of the plurality of retaining structures is separated from each other of the plurality of retaining structures by a separation volume. The plurality of retaining structures holds the hair treatment.

The present invention is also a hair treatment applicator for applying hair treatment to  
15 hair that has a handle, a plurality of heads connected to the handle, and a retaining structure connected to each of the plurality of heads. Each head of the plurality of heads is separated from each other head of the plurality of heads by a separation volume. The retaining structures hold the hair treatment.

The present invention is also a hair treatment applicator for applying hair treatment to  
20 hair that has a handle, a first head connected to the handle with the first head having a plurality of first tines forming a first retaining volume, a second head connected to the handle with the second head having a plurality of second tines forming a second retaining volume, and a separation volume. The first retaining volume and the second retaining volume are separated by the separation volume. The first and second retaining volumes hold the hair treatment.

25 Other and further objects, advantages and features of the present invention will be understood by reference to the following.

### BRIEF DESCRIPTION OF THE DRAWINGS

30 Fig. 1 is a top perspective view of the hair treatment applicator of the present invention;

Fig. 2 is a bottom perspective view of the applicator of Fig. 1;

Fig. 3 is a bottom view of the applicator of Fig. 1;

Fig. 4 is a top view of the applicator of Fig. 1;

Fig. 5 is a side view of the applicator of Fig. 1;

5 Fig. 6 is a front view of the applicator of Fig. 1;

Fig. 7 is a rear view of the applicator of Fig. 1; and

10 Fig. 8 is a bottom view of another embodiment of the hair treatment applicator of the present invention.

### DESCRIPTION OF THE INVENTION

15 Referring to the drawings and, in particular, Figs. 1 and 2, there is shown an embodiment of a hair treatment applicator of the present invention generally represented by reference numeral 10. Applicator 10 has a handle 20 and a head 50 connected to the handle. Preferably, handle 20 and head 50 are integrally molded or formed together.

20 Handle 20 is an elongated handle that a user grasps in his or her hand when passing head 50 along the user's hair, as will be discussed later in detail. Handle 20 can be any type of handle known in the art that is secured to, or integrally molded or formed with, head 50. Handle 20 is preferably ergonomically designed and contoured to maximize comfort and efficiency for a user due to the repetitive motion of applicator 10 as it passes along or strokes the user's hair.

25 Referring to Figs. 1 through 7, head 50 has a bilaterally symmetrical shape and preferably has a heart-like shape. Head 50 has a first comb 100 and a second comb 200. In this embodiment, applicator 10 has two combs 100, 200. However, as will be discussed later in detail, any number of combs can be used with the present invention.

30 Combs 100, 200 have bases 110, 210, respectively. Preferably, bases 110, 210 are circular in shape. Comb 100 has a plurality of tines 120 extending from base 110 and comb 200 has a plurality of tines 220 extending from base 210. Preferably, tines 120 are four tines that are disposed along base 110 in a square pattern and tines 220 are four tines that are disposed along base 210 in a square pattern. More preferably, tines 120, 220 are perpendicular to bases 110, 210.

Tines 120, 220 are preferably substantially cylindrical in shape, having proximal ends 122, 222 and distal ends 124, 224. Proximal ends 122, 222 are connected to bases 110, 210,

respectively. More preferably, tines 120, 220 have a frusto-conical shape or are tapered from proximal ends 122, 222 to distal ends 124, 224, respectively. Distal ends 124, 224 preferably have a flat end surface but other than flat end surfaces can be used, such as, for example, a pointed or sharply tapered end, to facilitate initially inserting tines 120, 220 through the section or lock of hair to be treated.

Preferably, tines 120, 220 have a height of between about 1/4 inches to about 1.0 inches. More preferably, tines 120, 220 have a height of between about 3/8 inches to about 3/4 inches. Preferably, proximal ends 122, 222 have a diameter of between about 1/16 inches to about 5/16 inches. More preferably, proximal ends 122, 222 have a diameter of between about 1/8 inches to about 1/4 inches. Preferably, distal ends 124, 224 have a diameter of between about 1/16 inches to about 3/8 inches. More preferably, distal ends 124, 224 have a diameter of between about 1/16 inches to about 5/16 inches.

While this embodiment has four tines 120 and four tines 220, alternative numbers of tines 120, 220 can also be used. Additionally, this embodiment arranges tines 120, 220 in square patterns along bases 110, 210 with each tine disposed in a corner of the square. Tines 120, 220 are disposed along bases 110, 210 such that the sides of the square pattern are either substantially parallel or perpendicular to the longitudinal axis of handle 20.

In use, hair flow is between tines 120, 220 parallel to the longitudinal axis of handle 20. The square pattern of tines 120, 220 is preferred because it provides for a more even distribution of the hair treatment that is held between the tines. The square pattern also facilitates the passage of hair through spaces 140, 240 between tines 120, 220, respectively, because the tines are evenly spaced apart and spaces 140, 240 are perpendicular to the hair flow (along the longitudinal axis of handle 20) so as to limit the resistance of the tines to the hair flow. However, alternative patterns or shapes for the arrangement of tines 120, 220 along bases 110, 210 can also be used, including rectangular patterns. Preferably, spaces 140, 240 are between about 1/32 inches to about 5/16 inches. More preferably, spaces 140, 240 are between about 1/16 inches to about 3/16 inches.

Combs 100, 200 also have baffles 130, 230. Baffles 130, 230 are preferably formed between the inner or inside pairs of tines 120, 220 such that the baffles are substantially parallel to the longitudinal axis of handle 20 and parallel to the path of hair flow through spaces 140, 240. Preferably, the height of baffles 130, 230 is between about 1/8 inches to about 1.0 inches. More preferably, the height of baffles 130, 230 is between about 1/4 inches to about 3/8 inches.

In the preferred embodiment, comb 100, base 110, tines 120 and baffle 130 form a retaining volume 150. Similarly, comb 200, base 210, tines 220 and baffle 230 form a retaining

volume 250. In use, retaining volumes 150, 250 are filled with the hair treatment that is to be applied to the user's hair and the hair passes through the retaining volumes through spaces 140, 240.

Head 50 also has a separation volume 300 and a grip 400. Separation volume 300 is formed by inner tines 120 of comb 100 and inner tines 220 of comb 200. Separation volume 300 provides for a path for hair that will not be treated with the hair product. In use, hair flow is through retaining volume 150, separation volume 300 and retaining volume 250. Hair treatment is placed in both retaining volume 150 and retaining volume 250. The middle or center strands of hair pass through separation volume 300 without being exposed to the hair treatment, while the outer strands of hair pass through retaining volume 150 and retaining volume 250 where the hair treatment is applied. This provides for a separate and distinct set of treated hair or highlights over two distinctly separate sections of hair with a separate, untreated section of hair in between.

Referring to Figs. 6 and 7, separation volume 300 has a width S. Preferably, width S is a minimum of about 1/4 inches. This minimum for width S allows for distinct, separate hair treatments or highlights with a distinct, separate untreated section in between.

Previous applicators suffer from the drawback of applying the hair product in a single, wide stripe. At the time of application, it appears to the user of such an applicator that there are multiple stripes because the strands of hair are temporarily being separated by the tines or teeth of the applicator, as it passes through the hair.

Grip 400 of head 50 is an indent or recess that is formed in a center portion of the rear of the head. Grip 400 allows a user to position his or her finger in the grip for better handling and control of applicator 10.

In the preferred embodiment, baffles 130, 230 assist in retaining the hair treatment in retaining volumes 150, 250 so that the hair treatment does not enter separation volume 300. Baffles 130, 230 also prevent strands of hair that are passing through separation volume 300 from making contact with any hair treatment that is on the outer periphery of retaining volumes 150, 250. This provides for a more even and uniform application of the hair treatment to the hair, and straighter lines of separation between the treated and untreated sections of hair.

In the preferred embodiment, applicator 10 has first comb 100 and second comb 200 with separation volume 300 therebetween. However, any number of a plurality of combs 100, 200 can be used in the present invention to form any number of separation volumes 300. Additionally, applicator 10 has two separate combs 100, 200 with separation volume 300 therebetween. Alternatively, a single comb 100 can be used having tines 120 arranged in a plurality of square or other patterns, which form one or more separation volumes 300 therebetween, so that hair can

flow through the one or more separation volumes to create a separate, distinct untreated section of hair between the treated sections of hair.

Applicator 10 is preferably injection molded as a single piece. Applicator 10 can be made from any moldable material, such as, for example, polyethylene or polypropylene.

5 Referring to Fig. 8, there is shown an alternative embodiment of a hair treatment applicator of the present invention generally represented by reference numeral 10'. Applicator 10' has a handle 20' and a head 50' connected to the handle. Head 50' has combs 100', 200' having tines 120', 220'. Tines 120', 220' are arranged in a square pattern with the sides of the square being either parallel or perpendicular to the longitudinal axis of applicator 10'.

10 In the alternative embodiment, inner tines 120', 220' do not have any baffle or wall structures therebetween. Combs 100', 200' have spaces 140', 240' that are both perpendicular to and parallel to the longitudinal axis of handle 20'. This allows a user to pass hair between tines 120, 220' along a path that is parallel to the longitudinal axis of handle 20' and create separate, distinct highlights or hair treatments. The user could also pass the hair between tines 120, 220'  
15 along a path that is perpendicular to the longitudinal axis of handle 20' and create a single, wide highlight or hair treatment, as is done with contemporary applicators.

In this alternative embodiment, the hair treatment has a high enough viscosity that it remains in retaining volumes 150', 250' without the need for a baffle or other separating structure. Preferably, a hair treatment product with a minimum viscosity of about 8000 cps  
20 would remain in retaining volumes 150', 250' without the use of baffles or walls between combs 100', 200' and separation volume 300'.

The present invention having been thus described with particular reference to the preferred forms thereof, it will be obvious that various changes and modifications may be made therein without departing from the spirit and scope of the present invention as defined herein.

25 All documents cited in the Detailed Description of the Invention are, in relevant part, incorporated herein by reference; the citation of any document is not to be construed as an admission that it is prior art with respect to the present invention.

While particular embodiments of the present invention have been illustrated and described, it would be obvious to those skilled in the art that various other changes and  
30 modifications can be made without departing from the spirit and scope of the invention. It is therefore intended to cover in the appended claims all such changes and modifications that are within the scope of this invention.